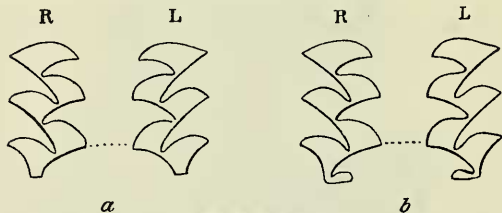


The following papers were read:—

1. On a Variation in the Pattern of the Teeth of a specimen of the Common Field Vole. By G. E. H. BARRETT-HAMILTON, F.Z.S.

[Received April 27, 1896.]

The pattern of the molar teeth of the Voles has always been regarded as an important feature in the classification of these animals. Of these teeth the first lower and third (last) upper show the most important specific and subgeneric characters. The remainder vary much less among the various species and subgenera than do the above, and of these the first upper is undoubtedly the most constant. As will be seen from the figure (a), the first upper molar has five cement-spaces with three external and three internal angles. The first cement-space is placed anteriorly, the second and fourth on the inside, and the third and fifth on the outside of the tooth. This is the form of the tooth throughout the genus *Microtus*, and the same pattern occurs also in the allied genera *Euotomys*, *Synaptomys*, *Myodes*, *Fiber*, *Neofiber*, and *Ellobius*. In *Siphneus* the pattern is indistinct, and *Cuniculus* has seven cement-spaces.



First upper molars.

Diagram of typical teeth of
Microtus agrestis (for comparison).

Diagram of abnormal teeth of
Microtus agrestis.

This tooth is, therefore, singularly constant in its pattern, and the variation described in the present paper, occurring in a specimen of *Microtus agrestis*, is on that account of some interest, as there is little doubt that had the specimen been received from some unknown or distant region, it would probably have formed the basis of a new species or perhaps even of a new subgenus. The variation, which occurs in the first upper molar on each side, is well shown in the figure (b) and requires only a few words of description. It consists of an extra small, but distinct internal cement-space, formed by an additional folding inwards of the enamel. The first molars in this specimen have therefore six

cement-spaces, with four inner and three outer angles. It is interesting that this variation should occur in a species in which the presence of five cement-spaces in the second upper molar (as distinguished from *four* in nearly all other Voles) is characteristic.

The specimen in which the variation occurs is now in my collection (no. 75). It is a very large male, and was killed by Mr. J. Lewis Bonhote, at Jerkin in Norway, on July 28, 1895.

2. On the Existence in Europe of Two Geographical Races, or Subspecies, of the Common Field Vole. By G. E. H. BARRETT-HAMILTON, F.Z.S.

[Received May 18, 1896.]

I wish to call attention to the existence in Europe of two distinct forms of the Common Field Vole (*Microtus agrestis*, Linn.). My own attention was first drawn to this fact on the receipt of some Voles, which Mr. J. Lewis Bonhote was good enough to collect for me in Norway. These Voles, although differing externally, especially in size, and in cranial characters from English specimens, possess dental characters which are identical with those of the Common Field Vole as found in England.

The existence of these two forms appears to have been noticed so long ago as 1841, in which year Jenyns¹ described as a new species (thus confirming the opinion of William Thompson of Belfast, to whom he wished to give the credit of the discovery) under the name of *Arvicola neglectus*, Thompson, some Voles collected by Thompson in Perthshire and Inverness-shire. Writing in 1841² and 1847³ De Selys-Longchamps made the suggestion that *M. agrestis* and *M. neglectus* might be only local races of the same species, but preferred to regard the two as distinct until their characters could be further studied. He stated that *M. agrestis* was to be found in Sweden and Norway, from Scania to 66 degrees of north latitude, but not in the high mountains; and that it was also reported from Denmark and Finland. *M. neglectus*, on the other hand, had a more southern distribution, embracing England, Scotland, Belgium, France north of the Seine and west of the Moselle, and possibly the Pyrenees. In 1856 Dehne reported it from Saxony; but subsequent writers, including Blasius⁴, Fatio⁵, and Bell⁶, have regarded it as a variety of *M. agrestis*, although the latter recognized the difference between the two forms, for however distinct the extreme forms of

¹ Ann. of Nat. Hist. vol. vii. pp. 270-274 (1841).

² Bull. Acad. Sci. Bruxelles, Sept. 1841. In this paper the differences between *M. agrestis* and *M. arvalis*, formerly confused, appear to have been first clearly pointed out.

³ Revue Zoologique, Oct. 1847, pp. 305-312.

⁴ Säugethiere Deutschlands, pp. 369 & 372 (1857).

⁵ Les Campagnols du Bassin du Léman, p. 70 (1867).

⁶ British Quadrupeds, ed. 2, p. 326 (1874).